STATE OF MAINE
Bureau of Health
Department of Human Services
11 State House Station
Augusta, ME 04333-0011

INFORMATION FOR SWIMMERS:
Prevention of Recreational Water Illnesses

1. HOW SWIMMING CAN MAKE YOU SICK

How can swimming make you sick?

Most recreational water illness (RWI) reported is diarrheal illness, which is spread by swallowing contaminated water.

In addition, swimming in water contaminated with germs can also cause infections in your eyes, nose, ears, and in cuts and scrapes.

People in the swimming areas share the water with everyone else in the water. If someone with diarrhea contaminates the water, swallowing the water can make people sick. Recreational water can also be contaminated by fecal matter rinsed off the bodies of swimmers. When people are ill with diarrhea their stool can contain millions of germs. Therefore, swimming when ill with diarrhea can easily contaminate the water and, if the swimming water is swallowed, can make you sick.

How does water get contaminated?

Public pools and bathing beaches can be contaminated by persons who swim while experiencing diarrhea or have a fecal accident.

Public swimming pools and bathing beaches, waterparks, hot tubs, and spas can also be contaminated by germs that are rinsed off swimmer's bodies including their rear ends. In addition, lakes, rivers, and the ocean can be contaminated by sewage spills, animal waste, and water runoff.

Diarrrheal accidents are not easily noticed, and as a result could contaminate even the best-maintained swimming area. Plus, some germs, like Crypto, (short for Cryptosporidium) are quite hardy and can live for several days.

What kinds of illnesses can people get from swimming?

Diarrheal illness
Skin rashes
Ear infections
Eye infections
Respiratory infections

These recreational water illnesses (RWIs) have been linked to swimming. However, reports to the US Department of Department of Health and Human Services, Centers for Disease Control, show that diarrhea is one of the most common illnesses. Diarrheal illness is spread when infected germs from human or animal feces gets into the water. Nearly all swimmers swallow some water when swimming. When the contaminated water is swallowed it can cause people to become ill.

Can swimming public swimming beaches spread head lice?

Not likely.

Lice survive by holding onto hair and are not likely to let go when someone's head goes under water. It would be rare to find lice floating in water. It is more likely that head lice are spread by sharing towels or other items that have been in contact with an infested person's hair. Teach your children not to share towels, hair brushes, etc., either at the beach or in changing rooms.

Be aware that swimming or washing hair within 1-2 days after treating with anti-lice shampoo will make the treatment less effective.

For more detailed information on head lice visit:
http://www.cdc.gov/ncidod/dpd/parasites/headlice/

Can people get a recreational water illness (RWI) from swimming in the ocean?

Yes.

Recreational water illnesses (RWIs) have been associated with swimming at ocean beaches. Some common germs can live for long periods of time in salt water. Swimmers should always avoid swallowing the water that they and others swim in.

Can people get a recreational water illness (RWI) from swimming in fresh water lakes and rivers?

Yes.

As with any swimming area, lakes and rivers can become contaminated with germs from sewage, animal waste, water runoff, as well as direct human contamination from fecal accidents and germs rinsed off the bottoms of swimmers. Avoid swimming in areas that have been identified as unsafe by local officials, local health departments, or the State of Maine Department of Human Services. Contact your state/local health department about germ-testing results for local recreational water. See the Healthy Beach web site at: http://www.state.me.us/dep/blwq/beach.htm

Some germs that live in fresh water normally don't infect humans. For example, Naegleria (nuh-GLEER-e-uh) is a germ that is found throughout the world. Naegleria is found in warm, stagnant bodies of water and can cause severe illness. Naegleria enters the body through the nose when you are swimming underwater or diving into water. Persons can prevent Naegleria infection by not swimming in small shallow ponds or areas posted by local health authorities as "No Swimming." Swimmers should hold their nose or use nose plugs when jumping or diving into water.

For more information on Naegleria visit:
www.cdc.gov/ncidod/dpd/parasites/naegleria/default.htm

Can people get a recreational water illness (RWI) from using chlorinated swimming pools, hot tubs and spas?

Yes.

Skin infections are the most common RWI spread through hot tubs and spas. Given that hot tubs and spas have warmer water than most bathing beaches, chlorine or other disinfectants get used up faster. For that reason, it is important that chlorine or other disinfectants in hot tubs and spas are checked by staff more regularly (several times a day) than public swimming pools.

Can people get a recreational water illness (RWI) from playing and wading in decorative or interactive water fountains?

Yes.

Several diarrheal illness outbreaks have been caused by playing and swallowing contaminated water in fountains. Not all decorative or interactive water fountains are chlorinated and filtered. Therefore when people, especially diaper-aged children, play in or soak themselves with the water jets, they can contaminate the water with fecal matter. This may spread germs that can make people sick.

Doesn't chlorine kill all germs found in swimming public pools, hot tubs, and spas?

Yes, chlorine does kill all germs but it takes time.

A few germs can survive in chlorinated water for several hours to several days in public pools, hot tubs, and spas and you can therefore get infected. It is important to maintain proper levels of chlorine to kill germs. However, be aware that even the best-maintained public pools can spread illness.

How can I make my pool or spa safe for my family's private use?

Simply stated, know what you are doing. You can obtain literature on pool maintenance you're your pool supplier. Insure that you pay attention to manufacturer's recommendations and hire a reputable pool consultant to maintain your pool, filter, etc, at the beginning and end of the season.

How can I assure that my practices are effectively preventing germs from contaminating my pool or spa?

Frequent checks of the water's pH, chlorine (bromine for spa), etc. will be the best gauge as to the water quality. If there is any cloudiness, contact your pool supplier immediately, as there may be a problem. A "shocking" with chlorine may be necessary.

2. PEOPLE AFFECTED

What is a person's chance of getting diarrhea when swimming?

An exact number does not exist.

If public pools and bathing beaches are properly maintained and in the case of a pool, properly disinfected (typically with chlorine), the risk is thought to be low for germs that are killed easily by chlorine. However, over the past 10 years, more than 150 outbreaks involving thousands of people have been reported, involving public pools and bathing beaches, waterparks, hot tubs, spas, lakes, and rivers. Many outbreaks are never detected.

Why do many recreational water illnesses (RWIs) go undetected?

Because people do not think that pool water can make them sick.

It can take several weeks before the germs in the water cause illness, so people often don't connect their illness with swimming. In addition, because diarrhea is so common, most people don't seek medical attention for it, so outbreaks of illnesses often don't get reported to health departments.

The longer the time period between swimming and illness the less likely people are to think that they became sick from swimming. For all these reasons, many outbreaks go undetected.

For a summary of reported outbreaks:
http://www.cdc.gov/ncidod/dpd/parasiticpathways/swimming_technical_reading.htm

Is it a good idea to swim when you have diarrhea?

Absolutely not! Swimming should not occur if your have any symptoms of diarrhea. You share the water with everyone in the pool, so swimming when ill with diarrhea can contaminate the water.

Stay out of water that is shared by others if you have diarrhea. Persons who swim while they have diarrhea threaten the health and well being of those sharing the water. This is true because recreational water illnesses (RWIs) are more easily spread when someone is experiencing diarrhea.

Should some people be more concerned than others about the spread of Crypto (short for Cryptosporidium)?

Yes.

Every swimmer should be concerned, but those living with a compromised immune system should be even more concerned.

They should realize that accidentally swallowing Crypto-contaminated water can cause illness. Children, pregnant women, and people with compromised immune systems (such as those living with AIDS, those who have received an organ transplant, or those receiving certain types of chemotherapy) can suffer from more severe illness than others.

So people with compromised immune systems are at greater risk for developing severe or life-threatening illness?

Yes.

If you are living with a compromised immune system (such as those living with AIDS, those who have received an organ transplant, or those receiving certain types of chemotherapy) you are at greater risk of developing severe or life-threatening illness if infected with Crypto (short for Cryptosporidium).

Recreational water illnesses (RWIs) can be spread by swallowing fecally contaminated water. Persons with compromised immune systems should be aware that swimming in public pools, waterparks, hot tubs, spas, decorative fountains, lakes, rivers, and salt water beaches might be contaminated with human or animal waste that contains Crypto.

Persons with a compromised immune system should consult with their health care provider before participating in behaviors that place them at risk for illness. Avoid swallowing the water when swimming or playing in recreational water. (1999 USPHS/IDSA Guidelines for Prevention of Opportunistic Infections in Persons with Human Immunodeficiency Virus).

For more recommendations:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4810a1.htm

For more detailed information on Cryptosporidium:
http://www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/factsht_crypto_prevent_ci.htm

What should someone do if he or she has diarrhea?

Most important, prevent dehydration by drinking plenty of fluids.

This is especially important for young children, pregnant women, and persons living with compromised immune systems (such as those living with AIDS, those who have received and organ transplant, or those receiving certain types of chemotherapy).

Seek medical care immediately if:

- your diarrhea is bloody
- your diarrhea does not resolve in 5 days
- your diarrhea is accompanied by fever or chills
- you are dehydrated. (Signs of dehydration include: dry or "cottony" mouth, cracked lips, dry flushed skin, headache, irritability, not urinating at least four times a day, no tears when crying, no sweating, or confusion).

A health care provider may prescribe medicine to help replace the fluids your body has lost because of the diarrhea. In some cases, over-the-counter antidiarrheal medications slow the diarrhea.

One of the germs that causes diarrhea is Crypto (short for Cryptosporidium). Health care providers do not routinely test for this germ. Therefore, persons experiencing diarrhea may have to ask their health care providers to test for Crypto. Be aware that there are many causes of diarrhea. A specific diagnosis can only be made by your health care provider.

Remember, for the health and safety of those sharing the pool water, don't swim when you have diarrhea. Diarrhea can contaminate the pool and make people sick.

For more information on diarrhea:
http://www.cdc.gov/ncidod/dpd/parasiticpathways/diarrhea.htm

3. PARENTS AND KIDS

My child has diarrhea and wants to go swimming. What should I do?

Don't take your child swimming. Otherwise, he or she may contaminate the water with fecal matter by simply moving through the water or having a fecal accident. Contaminating the pool puts other swimmers at risk of getting a recreational water illness (RWI). Although swimmers with diarrhea do not mean to contaminate the water, this is how illness is spread.

See information above for treatment of diarrhea.

Do swim diapers or swim pants prevent fecal matter from entering the water?

Not likely. Swim diapers are unlikely to prevent diarrhea (which may contain germs) from leaking into the pool. Even though diapers or swim pants may hold in some feces, they are not leak proof and can still contaminate the pool water. Therefore, it is recommended that you change your child often and make frequent trips to the toilet. Swim diapers or pants are not a remedy for frequent diaper changing.

4. FECAL MATTER IN THE POOL

What should I do if I see fecal matter in the water?

Immediately notify the attendant or lifeguard.

Staff should ask swimmers to leave the water immediately. The water may be tested and in the case of a pool, the chlorine levels should be raised, depending on the policy and initial chlorine level at the pool.

The wait between the closing and re-opening of the pool can be frustrating.

Be supportive of swimming area managers as the pool or bathing beach is closed to prevent the spread of recreational water illnesses (RWIs), which can make you and your family sick.

Should I think the water is safe if I don't see fecal matter in the water?

No. Just because you can't see these germs doesn't mean that they are not present.

Even the best-maintained public pool and bathing beach can spread illness. Therefore, the safest public pool and bathing beach are those that are not only well maintained, but also have the commitment of all patrons to practice healthy swimming behaviors.

Remember, in pools chlorine does kill all germs, but it takes time. Some germs can live for hours to several days in swimming public pools and bathing beaches. Be aware that as a swimmer, you play a crucial role in preventing recreational water illnesses (RWIs). In bathing beaches, where there is no chlorine, you must be aware of the risks outlined above to include any culverts or brooks that introduce contaminated water after rainstorms.

5. PROTECTION AGAINST RWIs

How can I protect myself, my family, and others from getting sick?

Healthy swimming behaviors are needed to protect you and your kids from RWIs and will help stop germs from getting in the pool in the first place. Here are six "P-L-E-As" that promote Healthy Swimming:

Three "P-L-E-As" for Everyone

- PLEASE don't swim when you have diarrhea...this is especially important for kids in diapers. You can spread germs into the water and make other people sick.
- PLEASE don't swallow the swimming water. In fact, try your best to avoid even having water get in your mouth.
- PLEASE wash your hands with soap and water after using the toilet or after changing diapers. You can protect others by realizing that germs on your body end up in the water.

Three "P-L-E-As" for Parents with Young Kids. Follow these "P-L-E-As" to protect your child and others from getting sick and to help keep RWIs out of your community:

- PLEASE take your kids on bathroom breaks often. Waiting to hear "I have to go" may mean that it's too late.
- PLEASE change diapers in a bathroom and not at public pools and or at the beach. Germs can spread to surfaces and objects in and around the pool and spread disease.
- PLEASE wash your child thoroughly (especially the rear end) with soap and water before swimming. We all have invisible amounts of fecal matter on our bottoms that could end up in the pool.